

istics were similar between treatment groups with regard to age, weight, cancer type and Hb. The proportion of patients transfused was similar between groups (~30%). Mean Hb values were consistently higher in the EPO group compared to the DARB group at Weeks 4, 8, 12, and 16. A repeated measures model showed a significant Hb increase from BL at each timepoint assessed in both groups as well as a significant difference between the two groups. Mean cumulative administered dose was 342,959 Units for EPO and 1239 mcg for DARB with overall ESA drug cost significantly lower in the EPO group compared to the DARB group (EPO \$4503, DARB \$5669 $p < 0.001$). **CONCLUSION:** In patients with Hb < 10 g/dL prior to ESA initiation, mean Hb levels were higher in the EPO group than the DARB group throughout the study, with ESA drug costs 21% lower in the EPO group than the DARB group. Such findings inform decision-makers on ESA-associated outcomes based on initiation as imposed in certain coverage policies.

PCN85

EFFECT OF AGE AND PLACE OF RESIDENCE ON COLORECTAL CANCER TREATMENTS IN NEBRASKA CANCER REGISTRY FROM 1998 TO 2003

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OBJECTIVE: The National Cancer Institute indicates surgery, chemotherapy, and/or radiation treatments in colorectal cancer (CRC). Data on the effect of age and place of residence on accessing CRC treatments in the Midwest region of United States is limited. Therefore, using Nebraska Cancer Registry we tested the hypothesis that CRC patients' residence-county and age would be associated with receipt of surgery, radiation, and chemotherapy treatments. **METHODS:** In a retrospective study, we examined treatments of 6813 CRC patients identified by incident ICD-O CM codes between January 1998, and December 2003 from the Nebraska Cancer Registry data. In multivariate logistic regression analyses, we studied the association of age and the year 2003 Urban Influence Code based residence-county with each of the three CRC treatments. **RESULTS:** After adjusting for patient's demographics, insurance payer, county-specific provider-to-population ratio, and stage and anatomical site, CRC patients living in small urban counties were more likely to receive chemotherapy than were those living in rural counties (adjusted Odds-Ratio, OR, 1.53; 95% confidence-interval, CI: 1.25–1.88, $p < 0.001$). However, there were no significant rural-urban differences in receiving any CRC treatment. Compared with 19-to-64-year-olds, patients aged 75 years and older with local CRC stage were less likely to receive surgery (OR, 0.22; 95% CI: 0.07–0.76, $p < 0.001$), patients aged 75 years and older were less likely to receive radiation (OR, 0.36; 95% CI: 0.24–0.55, $p < 0.0001$), and patients aged 75 years and older were less likely to receive chemotherapy (OR, 0.21; 95% CI: 0.16–0.27, $p < 0.0001$). **CONCLUSION:** Nebraska CRC patients living in rural counties were less likely to receive chemotherapy than were those living in small urban counties. Elderly CRC patients were less likely to receive surgery, radiation, and chemotherapy treatments. Despite limitations of registry data, these findings warrant the attention of decision-makers to age and geographic access issues in planning future delivery of CRC treatments.

PCN86

DRUG UTILIZATION AND COST CONSIDERATIONS OF ERYTHROPOIESIS-STIMULATING AGENTS (ESAs) IN PATIENTS WITH MYELODYSPLASTIC SYNDROMES (MDS)

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OBJECTIVE: To assess current real-world utilization of ESAs in patients with MDS, recent epoetin alfa (EPO) and darbepoetin alfa (DARB) dosing patterns and ESA treatment costs were examined. **METHODS:** A retrospective analysis was conducted using medical claims from approximately 45 health plans nationwide during the period of January 2004–June 2007. Patients included in the study were ≥ 18 years old, had ≥ 1 claim for MDS (ICD-9 code: 238.7) prior to initiating ESA therapy, and were newly initiated on EPO or DARB with ≥ 2 doses of either drug during the treatment period. Patients with cancer before initiating ESA treatment for MDS were excluded. The study period terminated with the last ESA treatment dose, end of data availability, initial AML diagnosis, or initial stem cell transplant, whichever occurred first. Mean cumulative ESA dose was used to calculate ESA cost (based on October 2007 WAC) and dose ratio (Units EPO : mcg DARB). **RESULTS:** The study population consisted of 275 patients who received EPO and 155 patients who received DARB. Mean age and gender distribution was similar between the two groups. Mean treatment duration was also similar for both groups (EPO: 75 days; DARB: 71 days; $p = 0.638$). The mean cumulative ESA dose administered was 374,415 Units for EPO and 1475 mcg for the DARB group, corresponding to a dose ratio of 254:1 (Units EPO: mcg DARB). Based on these doses, ESA cost was \$2139 (31%) less for EPO than for DARB (EPO: \$4688; DARB: \$6827; $p = 0.010$). **CONCLUSION:** These real-life clinical practice findings in the MDS population show significantly lower drug cost in the EPO group compared to the DARB group and a dose ratio of 254:1 (Units EPO : mcg DARB) between the two agents.

PCN87

USE OF PHARMACOECONOMIC MESSAGES IN ONCOLOGY PROMOTIONAL MATERIALS

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OBJECTIVE: To evaluate the presence of pharmacoeconomic messages in the US, France, Germany, Italy, Spain, and UK for ten representative oncology products (Alimta, Avastin, Gemzar, Herceptin, Neulasta, Novantrone, Sutent, Tarceva, Taxotere, and Velcade). **METHODS:** This qualitative assessment covered the following data sources: 1) Government websites (Canadian Agency for Drugs and Technologies in Health, National Institute for Health and Clinical Excellence, Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen, La Haute Autorité de santé, and Cochrane Reviews); 2) company sponsored product websites; 3) FDA and EMEA products labels; and 4) promotional materials (detail aid brochures, direct mail, and professional journal/newsletter ads). These data sources were searched for relevant pharmacoeconomic messaging including statements regarding cost, QoL, utility, patient preference, etc. **RESULTS:** While health technology assessments have a clear impact on market access, specific examples of pharmacoeconomic data in promotional messaging was limited. Pharmacoeconomic messages, with particular focus on QoL, were more prominent in promotional materials of oncology

products in Europe as compared to the US. **CONCLUSION:** While European regulatory bodies have long-embraced QoL/PROs (along with efficacy and safety) as key endpoints for approval, the FDA is starting to acknowledge pharmacoeconomics in their evaluations. Further research is warranted to determine if there is a correlation between pharmacoeconomic messaging and product uptake, with prescription or unit sales analysis combined with large scale physician surveys on influences of prescribing patterns.

PCN88

FACTORS ASSOCIATED WITH THE PRESCRIPTION OF ADJUVANT HORMONAL THERAPIES AMONG MEDICAID ENROLLEES WITH BREAST CANCER

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OBJECTIVE: The purpose of this study was to examine various patient and provider characteristics associated with being prescribed an aromatase inhibitors (AI) v. tamoxifen only therapy among a cohort of North Carolina (NC) Medicaid enrollees diagnosed with breast cancer. **METHODS:** Data was gathered using the Linked NC Central Cancer Registry-Medicaid Claims database which links NC cancer registry claims with Medicaid data. A logistic regression model was built to determine the odds of an individual ever receiving an AI during the study period. **RESULTS:** A total of 600 patients were included, of which 451 (75.2%) and 149 (24.8%) received tamoxifen only and AI (alone or in combination) therapy, respectively. Results showed that patients who lived in urban areas (compared to rural), were postmenopausal (based on age ≥ 55), had regional- or distant-staged cancer (opposed to local or unknown), had been hospitalized in the year prior to treatment index, and had breast conserving surgery (BCS) (rather than mastectomy) had 1.97 [1.29, 3.00], 2.26 [1.80, 2.83], 2.74 [1.79, 4.20], 1.87 [1.20, 2.92], 0.64 [0.41, 1.00] times the odds, respectively, of ever receiving an AI compared to tamoxifen only. Additionally, for every one-year increase in the time a patient started hormonal therapy, the odds of receiving AI therapy (compared to tamoxifen only) increased 2.26 [1.80, 2.83] fold. **CONCLUSION:** The differences in antiestrogenic treatment type based on whether the patient visited a hospital in the year prior to the study and in whether the patient lived in urban or rural area may represent disparities in access to advances in care. Furthermore, it may be the case that women who undergo mastectomy or who have locally staged cancer are not being treated aggressively enough with novel antiestrogenic therapies.

PCN89

DRUG UTILIZATION PATTERNS AND COSTS FOR ERYTHROPOIESIS-STIMULATING AGENTS (ESAs) IN A MANAGED CARE CANCER POPULATION RECEIVING CHEMOTHERAPY

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OBJECTIVE: To assess current utilization patterns and costs for epoetin alfa (EPO) and darbepoetin alfa (DARB), two ESAs, in managed care cancer patients receiving chemotherapy. **METHODS:** Medical claims from the Ingenix Impact National Managed Care Database between January 2006 and June 2007 were analyzed. Patients included were ≥ 18 years old, had ≥ 1

claim for cancer within 90 days prior to treatment initiation, were newly initiated on EPO or DARB with ≥ 2 doses of either drug, and received chemotherapy during ESA treatment. Mean cumulative ESA dose was used to calculate ESA cost (based on October 2007 wholesale acquisition cost [WAC]) and dose ratio. **RESULTS:** A total of 2322 EPO and 4353 DARB formed the study population. EPO patients were older (57.7 vs. 55.7 years; $p < 0.0001$) and a lower proportion were women (65% vs. 69%; $p = 0.0002$), compared to DARB patients. Mean ESA treatment duration was slightly longer in the EPO group (59 vs. 55 days; $p = 0.0001$). The mean cumulative dose (SD) was 312,723 (255,432) Units for EPO and 1174 (833) mcg for DARB, resulting in a dose ratio of 266:1 (Units EPO : mcg DARB). Based on these doses, WAC-based ESA cost was 28% less for EPO than for DARB (EPO \$3915; DARB \$5434; $p < 0.0001$). A sensitivity analysis using January 2008 average sales price +6% also indicated lower cost for EPO (EPO \$2803; DARB \$3396; $p < .0001$). This finding was also maintained after adjusting for age, gender, treatment duration, payer type, type of malignancies, cancer treatments, and severity indicators, (adjusted cost difference: \$1788, $p < 0.0001$). **CONCLUSION:** This observational study of 6675 cancer patients reported a dose ratio of 266:1 which resulted in a 28% lower drug cost in the EPO group compared to the DARB group. These findings provide greater understanding of current real-world ESA utilization in the managed care setting.

PCN90

EFFECT OF THE HUNGARIAN ORGANIZED NATIONWIDE CERVICAL CANCER SCREENING PROGRAMME ON THE COVERAGE OF WOMEN UNDER THE AGE OF 25 YEARS

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OBJECTIVE: Organized nationwide screening programme for cervical cancer was introduced in Hungary in 2003. The aim of this study is to analyze the three year screening rate (coverage) of the organized cervical cancer screening programme in women aged less than 25 years. Although women under 25 years are out of the scope of the organized screening programme, but opportunistic screening may be applied. **METHODS:** The data derive from the financial database of the National Health Insurance Fund Administration (OEP) of Hungary covering the period of 2000–2002 (without organized screening) and 2003–2005 (with organized screening). We calculated the three-year screening rate for 2003–2005 according to the age-group of women less than 25 years (15–19 and 20–24). Screening is defined with cytological examination of Papanicolaou smear and includes all smears taken either within or outside of the organized programme. **RESULTS:** The three-year screening rate of women aged 25–64 years was 52.65 % in 2003–2005. The coverage of women under 25 years was the following in 2003–2005: 15–19 years: 31.94 %; 20–24 years: 61.20 %. Comparing this values to the coverage of 2000–2002 (without organized screening) we found a decreasing tendency in these two age-groups: 15–19 years: –0.06 percent point decrease (non-significant), 20–24 years: –6.28 percent point decrease ($p < 0.01$). **CONCLUSION:** We found that coverage of women aged 20–24 being out of the scope of the organized cervical cancer screening programme is higher (61.2 %) than the average of target age group of 25–64 years (52.65). Despite of this finding, the coverage of women 15–19 and 20–24